



# Using Science to Save Lives: CDC AND THE FIGHT AGAINST GLOBAL HIV/AIDS

*Program Update  
June 2013*





**Landmark scientific advancements** have brought the world to a tipping point in the fight against HIV/AIDS – a point where the potential for achieving an AIDS-free generation is possible. We now have the tools to dramatically drive down the rate of new HIV infections, allowing the United States and the global health community to take concrete steps towards ending the HIV epidemic.

Under the leadership of Dr. Eric Goosby, U.S. Global AIDS Coordinator for the President's Emergency Plan for AIDS Relief (PEPFAR), we are making incredible progress by leveraging science, innovation, and evidence-based strategies to save millions of lives in countries hardest hit by this devastating disease.

In the past two years there has been a 60% increase in the number of people accessing lifesaving treatment. Previously, this level of progress took a decade to achieve. Similar strides have been made in PEPFAR's scale up of treatment to prevent mother-to-child transmission.

The gains we've made are impressive but our work is not done. To prevent losing ground, we must continue to aggressively scale-up prevention interventions proven to halt the spread of HIV. A historic opportunity is before us – the containment of the HIV/AIDS epidemic.

As PEPFAR moves forward to achieve an AIDS-free generation, CDC remains resolute in our commitment to this fight and halting the devastation this disease has brought to families, communities, and nations around the world.

Thomas R. Frieden, MD, MPH  
Director, Centers for Disease Control and Prevention  
Administrator, Agency for Toxic Substances and Disease Registry



*“An AIDS-free generation ... is within our reach.”*

– President Barack Obama, 2013 State of the Union Address



Photo: White House, World AIDS Day, 2012



*“The goal of an AIDS-free generation may be ambitious, but it is possible with the knowledge and interventions we have right now. And that is something we’ve never been able to say without qualification before. Imagine what the world will look like when we succeed.”*

– Former U.S. Secretary of State Hillary Rodham Clinton, November 2011

And the commitment continues...

*“Today, astonishingly, we are standing on the edge of the potential of an AIDS-free generation ... because we believe that relieving preventable suffering doesn’t need a justification. And I think that’s part of our values.”*

– U.S. Secretary of State John Kerry, February 2013



# Table of Contents

## Section 1: TURNING THE TIDE ON THE GLOBAL HIV/AIDS EPIDEMIC

<b>The Epidemic</b> .....	1
A Modern-Day Plague, Unchecked .....	1
Today, a Very Different Picture .....	2
<b>A Leader Emerges</b> .....	3
The United States .....	3
<b>Other Key Players</b> .....	3
The Global Fund to Fight AIDS, Tuberculosis, and Malaria .....	3
International and U.S. Partners .....	4
<b>CDC's Role in PEPFAR</b> .....	4
Science, Innovation, and Collaboration .....	4
An Expanded Role .....	4
<b>Achieving an AIDS-Free Generation</b> .....	5
Science Guides Strategy .....	5
Accelerated PEPFAR Goals .....	6
<b>Challenges Remain</b> .....	7

## Section 2: USING CDC'S SCIENTIFIC EXPERTISE TO FIGHT GLOBAL HIV/AIDS

<b>Leveraging Science to Win the Fight</b> .....	8
<b>Technical Expertise and Focus Areas</b> .....	9
<b>Synergies across the Agency</b> .....	10

## Section 3: INCREASING PROGRAM IMPACT

<b>Using a Comprehensive, Evidence-Based Approach</b> .....	11
Scaling-Up What Works .....	11
Data-Driven Decision Making .....	11
<b>Accelerating Progress and Capacity</b> .....	12
Innovation and Technology .....	12
<b>Increasing Cost-Effectiveness and Impact</b> .....	13
Stretching Every Dollar Invested .....	13
<b>Advancing Strategic Collaboration</b> .....	14
Innovative Partnerships .....	14
<b>Strengthening Program Integration</b> .....	15
Strategic Program Integration and Linkages .....	15

## Section 4: TRANSITIONING TO COUNTRY LEADERSHIP

<b>Successes in Transitioning to Country Leadership</b> .....	16
Making Strategic Investments .....	16
CDC's Proven Track Record .....	17
<b>Building Host Country Capacity</b> .....	18
Leveraging CDC's Unique Workforce .....	18
Strengthening Laboratory Capacity .....	19
High Impact Laboratory Training.....	20

## Section 5: CDC's PRIORITIES MOVING FORWARD

<b>Accountability and Impact</b> .....	21
A Framework for Accountability .....	21
Ensuring Impact .....	22
Reaching the Tipping Point in the Epidemic .....	23



## Section I: TURNING THE TIDE ON THE GLOBAL HIV/AIDS EPIDEMIC

---



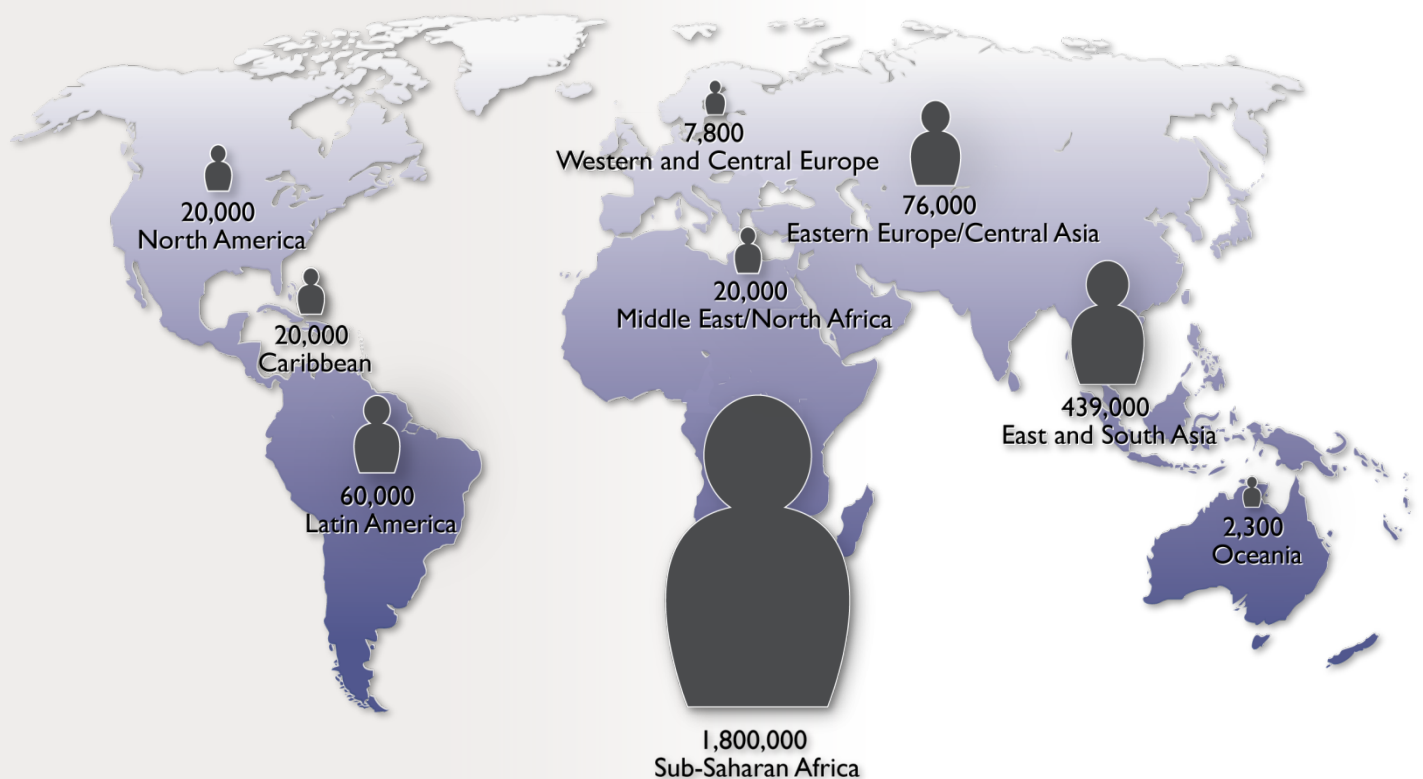
## The Epidemic

### A MODERN-DAY PLAGUE, UNCHECKED

In 2001, HIV/AIDS threatened the foundations of societies and created such instability that the United Nations Security Council identified HIV as a global security threat. By 2005, the epidemic had quickly spread around the world, taking the lives of 2.3 million men, women, and children in that year alone (see figure 1 below).

This modern-day plague hid within populations and individuals without symptomatic detection for years, which resulted in it rapidly spreading and overwhelming the ability of many countries to respond, bringing despair and economic instability. By 2005, four people died from HIV/AIDS every minute.

**Figure 1: Deaths in 2005 from HIV/AIDS Totaled 2.3 Million**



Source: UNAIDS Report on the Global AIDS Epidemic, 2012



## TODAY, A VERY DIFFERENT PICTURE

The United States and a world community united in the fight against HIV/AIDS have made unprecedented progress, changing the face of the epidemic and saving millions of lives every day.

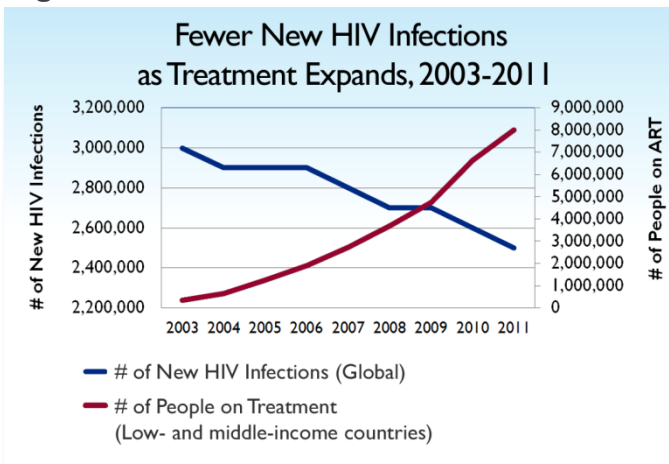


Photo: CDC-Uganda

In 2012, UNAIDS reported historic gains towards ending AIDS, including dramatic declines in new HIV infections and HIV-related deaths (see box at right).

Figure 2 below shows the declining trajectory of new HIV infections as antiretroviral treatment increased.

Figure 2



Source: UNAIDS Report on the Global AIDS Epidemic, 2012

## Progress in Fighting the Epidemic



**50%** 50% reduction in new HIV infections between 2001 and 2011 in 25 countries



**43%** 43% decline in new HIV infections in children from 2003 to 2011, with over half of that decline occurring within the last two years



**50%** 50% or greater drop in HIV/AIDS-related deaths between 2005 and 2011 in 14 countries, with another 29 countries achieving a reduction of 25-49%

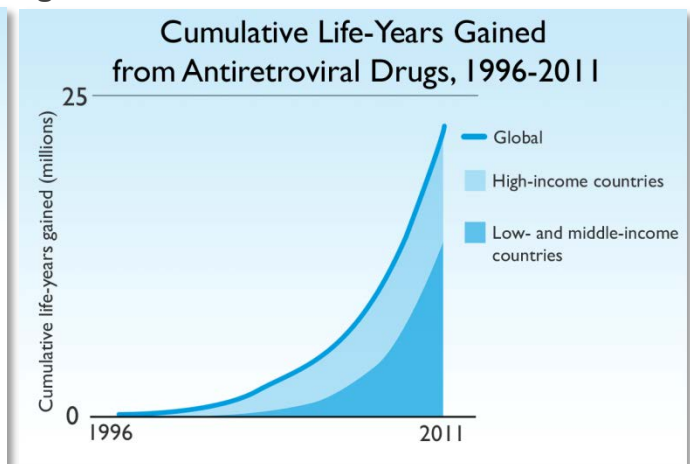


**25%** 25% decline in TB-related deaths worldwide and 28% decline in sub-Saharan Africa between 2004 and 2011

Source: UNAIDS World AIDS Day Report, 2012

The acceleration of progress over the last few years is also reflected in terms of longer life span (life-years gained) due to antiretroviral treatment (see figure 3).

Figure 3



Source: UNAIDS, Together We Will End AIDS, 2012



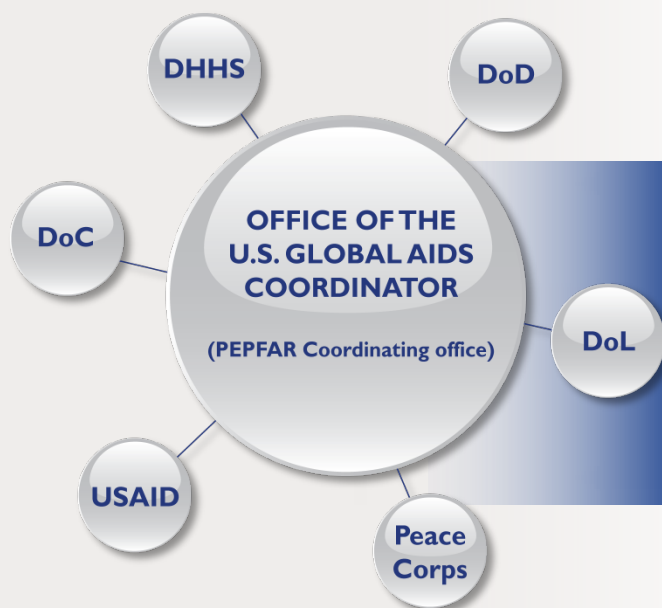
Ambassador Eric Goosby,  
U.S. Global AIDS Coordinator  
(Photo: CDC)

## A Leader Emerges

### THE UNITED STATES

The United States has played a lead role in the fight against HIV/AIDS with the launch of the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) in 2003. Congress appropriated \$15 billion for the first five years and reauthorized PEPFAR in 2008 for \$48 billion with strong bipartisan support.

Under the leadership of the Office of the U.S. Global AIDS Coordinator in the Department of State, PEPFAR targets resource-constrained countries hardest hit by the epidemic and increases its impact by leveraging the strengths of each of its U.S. implementing agencies for a whole-of-government approach.



### PEPFAR Implementing Agencies

Department of Commerce (DoC)  
Department of Defense (DoD)  
Department of Health and Human Services (DHHS)  
Department of Labor (DoL)  
Peace Corps  
U.S. Agency for International Development (USAID)

## Other Key Players

### THE GLOBAL FUND TO FIGHT AIDS, TUBERCULOSIS, AND MALARIA

Championed by the United States, the Global Fund was established in 2002 and has since invested billions of dollars from donor countries to assist countries hardest hit by these diseases but lack the resources to combat them. To date, \$22.9 billion has been donated to 151 countries.



## INTERNATIONAL AND U.S. PARTNERS

Health is an international priority in which U.S. expertise, leadership, and experience can guide effective collaborative action. “Health is the issue that aligns the interests of countries around the world. If we can limit the spread of pandemics all people benefit,” said Kathleen Sebelius, Secretary of Health and Human Services, at the release of the HHS Global Health Strategy (January 2012).

Many partners and stakeholders have made and continue to make essential contributions to the global HIV response. They include, but are not limited to, the following:

- World Health Organization ([WHO](#))
- Joint United Nations Programme on HIV/AIDS ([UNAIDS](#))
- The United Children’s Fund ([UNICEF](#))
- [World Bank](#)
- Ministries of Health
- Faith-Based Organizations and Foundations
- Private Sector Partners
- Civil Society



*Kathleen Sebelius,  
Secretary of Health  
and Human Services*



*(Photo: CDC)*

## CDC’s Role in PEPFAR

### SCIENCE, INNOVATION, AND COLLABORATION

On the front lines since the start of the epidemic, CDC has been fighting HIV/AIDS for more than 30 years, and has played a critical role in PEPFAR since its inception. Leveraging the agency’s public health expertise, applying the latest science, and working through collaborations has led to accelerated progress, program innovation, and increased health impact.

### AN EXPANDED ROLE

After the launch of PEPFAR, U.S. Congressional leaders recognized the importance of a public health science-based approach to ensure program effectiveness, and expanded CDC’s role in the Tom Lantos and Henry J. Hyde Act of 2008 reauthorizing PEPFAR (see box below).



#### 2008 PEPFAR legislation expands CDC’s role in:

- Evidence-based prevention interventions
- Program monitoring and evaluation
- Impact evaluation operations research
- Laboratory and workforce capacity
- Health systems strengthening
- Malaria, TB, and microbicide research



## Achieving an AIDS-Free Generation

### SCIENCE GUIDES STRATEGY

Scientific findings have shown three interventions to be pivotal for dramatically driving down the rate of new HIV infections and, if brought to scale, could pave the way for achieving an AIDS-free generation (see box at right).

These interventions include:



#### Antiretroviral Treatment (ART)

Research findings demonstrate that ART is highly effective in reducing the risk of HIV transmission by **96%**. (*N Eng J Med.* 2011; 365: 493-505)



#### Preventing Mother-To-Child HIV Transmission

With antiretroviral drugs, an HIV-positive mother's risk of transmitting the virus to her child is reduced to less than **5%**. [*WHO, Antiretroviral Drugs for Treating Pregnant Women and Preventing HIV Infection in Infants (2010)*]

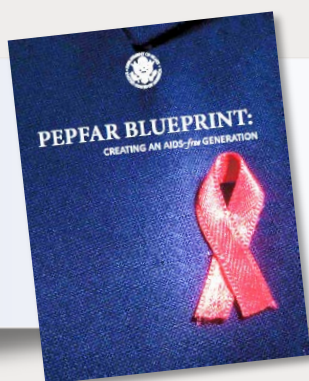


#### Voluntary Medical Male Circumcision

This one-time intervention reduces the risk that men will acquire the virus from women by more than **60%**, which also benefits women by lowering the rate of infection among men. (*PloS Med.* 2005; 2e298 and *Lancet.* 2007; 369:634-656 and 657-666)

### An AIDS-Free Generation

- Virtually no children are born infected with the HIV virus
- As these children become teens and adults, they are at far lower risk of becoming infected than they would be today
- If they do acquire HIV, they have access to treatment that helps prevent them from developing AIDS and passing the virus to others



### The PEPFAR Blueprint: Creating an AIDS-Free Generation

The Obama Administration unveiled the Blueprint on November 29, 2012. The [Blueprint](#) provides a roadmap for what the United States will do to achieve an AIDS-free generation.

## ACCELERATED PEPFAR GOALS

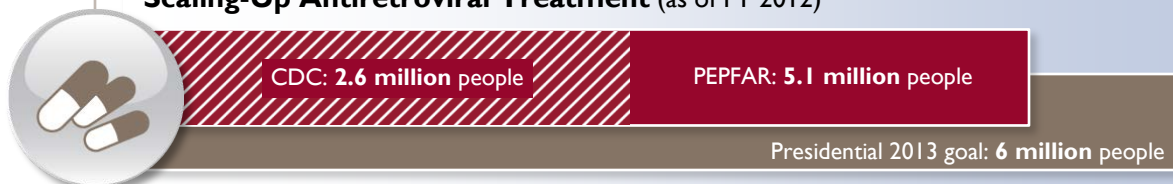
The implications of scientific breakthroughs to contain the HIV/AIDS epidemic and the possibility of an AIDS-free generation prompted President Obama to announce accelerated goals for 2013 for each of the core interventions identified as drastically reducing the transmission of HIV (see below). This announcement has reinvigorated the world community in the fight against HIV/AIDS.



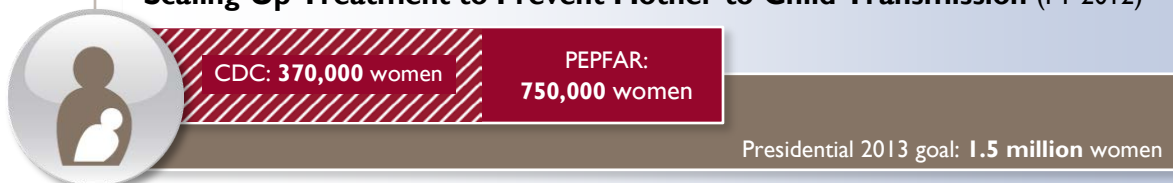
Photo: White House

## Progress toward Presidential 2013 Goals

### Scaling-Up Antiretroviral Treatment (as of FY 2012)



### Scaling-Up Treatment to Prevent Mother-to-Child Transmission (FY 2012)



### Scaling-Up Voluntary Medical Male Circumcision (as of FY 2012)



Note: PEPFAR totals include CDC contributions

Source: PEPFAR World AIDS Day 2012 Update; CDC, 2012





## Challenges Remain

Although tremendous progress has been achieved, and we have the tools needed to create an AIDS-free generation, our work is not done. We need to reach many more people, improve public health infrastructure, and build country capacity to end this epidemic. This effort will require stretching every dollar invested and leveraging the strengths of each PEPFAR implementing agency.

Each day  
about  
**7,000**  
people  
were  
newly  
infected  
with HIV.

### UNAIDS Epidemic Data, 2011

**34 million people** were living with HIV but only 50% knew their HIV status.

**Only 30%** of eligible pregnant women with HIV received antiretroviral treatment.

**Nearly 50% of the 14.8 million** people who were eligible for HIV treatment did not receive treatment.

**72% of eligible children** living with HIV did not receive treatment.

Source: UNAIDS World AIDS Day Report, 2012; UNAIDS Global Fact Sheet, 2012

***“We stand at a tipping point in the fight against HIV/AIDS, and working together, we can realize our historic opportunity to bring that fight to an end.”*** - President Barack Obama, 2012 World AIDS Day



## Section 2: USING CDC's SCIENTIFIC EXPERTISE TO FIGHT GLOBAL HIV/AIDS

---



## Leveraging Science to Win the Fight

CDC has conducted HIV/AIDS research for over 30 years at home and abroad. Since the inception of PEPFAR in 2003, CDC has published over 700 articles in peer-reviewed publications covering a wide range of HIV research including multi-country studies to determine program impact as well as the most efficient and effective ways to implement HIV/AIDS programs.

CDC also consistently and efficiently translates scientific findings into high impact strategies and programmatic interventions. Once piloted and put into practice, CDC works with PEPFAR-supported host countries to implement strategies and interventions throughout their national HIV programs. Examples are below.

## Translating Science into Action for Greater Health Impact

### Mother-to-Child Transmission

**Triple-Antiretroviral Prophylaxis to Prevent Mother-To-Child HIV Transmission through Breastfeeding—The Kisumu Breastfeeding Study, Kenya: A Clinical Trial**

Timothy K. Thomas, Rose Masaba, Craig B. Brinkov, Richard Ndwiga, Christopher Ndwiga, Andrew Mwangi, Robert Henson, Dennis Kipkoech, Michael C. Thigpen, Mari Buley, Laurence Shulaker, Kevin M. De Cock

[Read article](#)

### HIV Treatment Outcomes

**Four-Year Treatment Outcomes of Adult Patients Enrolled in Mozambique's Rapidly Expanding Antiretroviral Therapy Program**

Andrew F. Aust, Francisco Mufumba, Ray W. Ehrlich, Marc Sanchez, Charity Alhede, Lisa J. Nelson, Todd E. Berbrook

[Read article](#)

### Male Circumcision

**Voluntary Medical Male Circumcision: Translating Research into the Rapid Expansion of Services in Kenya, 2008–2011**

Zabede Mwand, Anne Murphy, Jason Reed, Kipruto Chesang, Emmanuel Ijeunhai, Kawango Agot, Emma Llewellyn, Charles Kiro, Kennedy Senem, Isaac Abuya, Moses Losapt, Ragna Mbayaki, Ndugu Kiro, [...], Noem Buck, [...]

[Read article](#)





## Technical Expertise and Focus Areas



CDC's workforce of clinicians, health scientists, prevention specialists, epidemiologists, laboratorians, and public health advisors work side-by-side with Ministries of Health and other host country partners to implement effective national HIV programs in the core technical areas below.

(For more information, go to [www.cdc.gov/globalaids/](http://www.cdc.gov/globalaids/))

**HIV Care and Treatment** – Expanding services for quality HIV/AIDS care and treatment and transitioning these services to full host country leadership in under 10 years without compromising service quality

**TB-HIV Integration** – Integrating TB and HIV services to reduce illness and death

**Maternal and Child Health** – Expanding quality care and treatment services for women and children to address their unique needs and vulnerabilities

**HIV Prevention** – Implementing a comprehensive, evidence-based prevention approach to halt new infections

**HIV Counseling and Testing** – Scaling up a variety of proven approaches to testing and counseling, which serve as critical entry points for initiating prevention, care, and treatment services

**Local Workforce Capacity** – Building workforce capacity to ensure that Ministries of Health and other local partners can lead and implement their own HIV response

**International Laboratories** – Establishing high quality laboratory networks and systems to support the HIV response as well as manage other infectious and non-infectious diseases

**Disease Surveillance and Program Monitoring Systems** – Strengthening disease surveillance and health systems for disease and program monitoring to ensure data-driven decision-making and program impact

**Health Economics** – Conducting groundbreaking research to identify and assess program costs, efficiency, and societal benefits

**Health Information Systems** – Supporting the design and development of national health information systems that provide the infrastructure and information necessary for enhanced health care delivery and national planning



Photo: CDC

## Synergies across the Agency

CDC works strategically across the agency to harness its diverse technical expertise and create synergies for increased health impact and improved outcomes. For instance, CDC assesses strategies and tools proven to be effective in the United States and adapts them for use in resource-constrained settings. Examples below illustrate interventions developed by scientists from across CDC.



### Basic Care Package

This integrated intervention reduces deaths, hospital visits, and illness among HIV-positive people and their families by bundling high impact, low-cost interventions that minimize susceptibility to common HIV-associated infections. The mix of interventions selected by experts across CDC are tailored to each setting and can include powerful antibiotics, insecticide-treated bed nets to prevent malaria, screening and management of sexually transmitted diseases, services to prevent mother-to-child transmission, and safe water systems. Brought to scale in Uganda, CDC has replicated it in 15 additional countries.

### Families Matter!

CDC originally developed the Families Matter program for the U.S. HIV response to promote effective parent-child communication on sexual risk reduction for 9-12 year olds. With the support of those who created the program, CDC has been able to culturally adapt it for use in African settings. Successfully piloted in Kenya, CDC is now implementing the program in PEPFAR-supported countries throughout sub-Saharan Africa.



Namibia



Zambia

### TB-HIV Collaboration

CDC leverages its HIV and TB disease experts to advance efforts to integrate and scale-up effective TB-HIV service delivery. For example, CDC is collaborating with Ministries of Health on projects in Zambia and Namibia that evaluate the impact of national scale-up of intensified TB case finding, isoniazid preventive therapy, TB infection control, and early initiation of antiretroviral treatment (ART) on illness and death of HIV-positive individuals.



## Section 3: INCREASING PROGRAM IMPACT

---

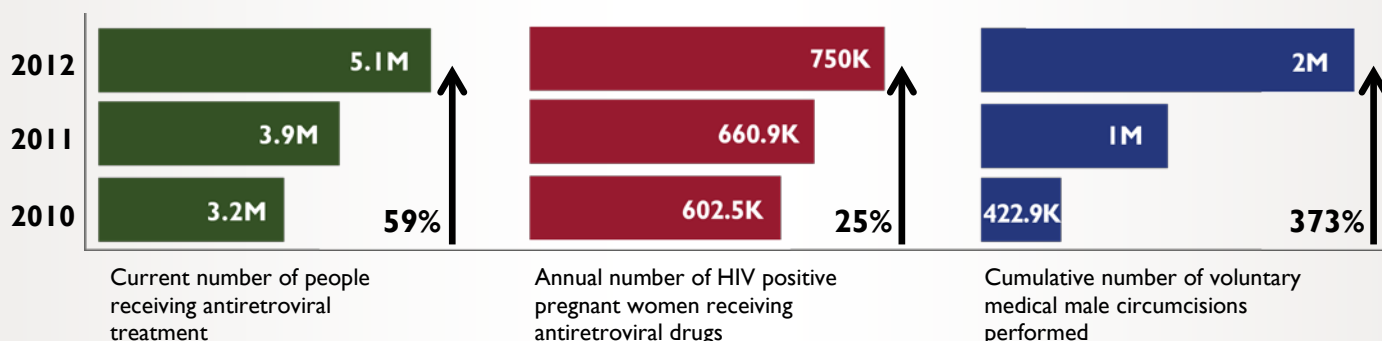


## Using a Comprehensive, Evidence-Based Approach

### SCALING-UP WHAT WORKS

CDC uses a comprehensive combination prevention strategy that is tailored to the unique characteristics of the local epidemic and leverages high impact biomedical interventions proven to work. These core interventions include HIV treatment to reduce transmission to partners, prevention of mother-to-child transmission, and voluntary medical male circumcision (VMMC). PEPFAR progress in scaling up these interventions is illustrated in figure 4.

**Figure 4: PEPFAR Scale-Up of Core Prevention Interventions**

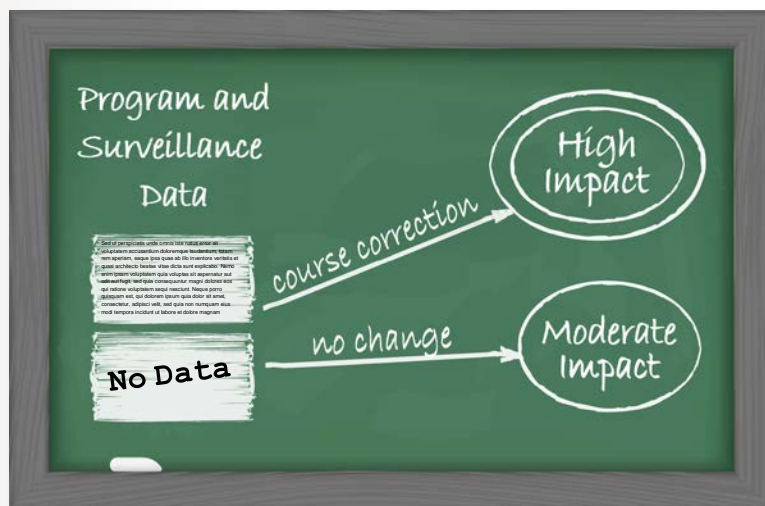


Sources: PEPFAR World AIDS Day 2012 Update; PEPFAR Annual Reports, 2011 and 2012; Joint PEPFAR-WHO VMMC Meeting, Johannesburg, S.A., September 2012

### DATA-DRIVEN DECISION MAKING

CDC works with host countries to establish and use surveillance systems to determine how the epidemic is spreading through their populations. With this knowledge, rapid course corrections can be made to increase impact.

Program monitoring systems are also established to track and evaluate program progress and effectiveness. These data are critical to program planning for improved outcomes and greater impact.





## Accelerating Progress and Capacity

### INNOVATION AND TECHNOLOGY

Advances in innovation and technology can rapidly accelerate progress, increase program capacity, and achieve efficiencies. CDC has developed new advances as well as leveraged existing US-based innovation and technology by adapting them for use in resource-constrained settings and replicating them throughout PEPFAR-supported countries. Below are examples of CDC's work in this area.

#### Increased Prevention Impact: Dried Blood Spot Technology

Left untreated, 50-60% of HIV-infected infants die by age two. Using highly stable, low-cost dried blood spot technology, CDC introduced a game-changer for early infant diagnosis, saving the lives of thousands of babies across 25 PEPFAR-supported countries.

*(Photo: CDC-Botswana)*



#### New HIV Incidence Test

CDC developed a simple, low cost test that can distinguish old from new infections.

This information can then be used to identify where the highest rates of new infection are occurring so that prevention efforts can be aligned accordingly

and assessed for effectiveness. Training for this technology is being conducted in China, Ghana, Kenya, Nigeria, South Africa, Swaziland, Thailand, Vietnam, Zambia, and Zimbabwe.

*(Photo: CDC-South Africa)*



#### Harnessing Technology to Improve Treatment Scale-Up

Monitoring the scale-up of HIV treatment is challenging in resource-limited settings. To address this challenge, CDC supported the development of [TRACnet](#), an innovative cell-phone and web-based data management system that is quick and easy to use, even in the most remote health facilities. In Rwanda, this system captured essential data during the rapid scale-up of HIV treatment, which helped them achieve high levels of treatment coverage, including in hard-to-reach populations.





## Increasing Cost-Effectiveness and Impact

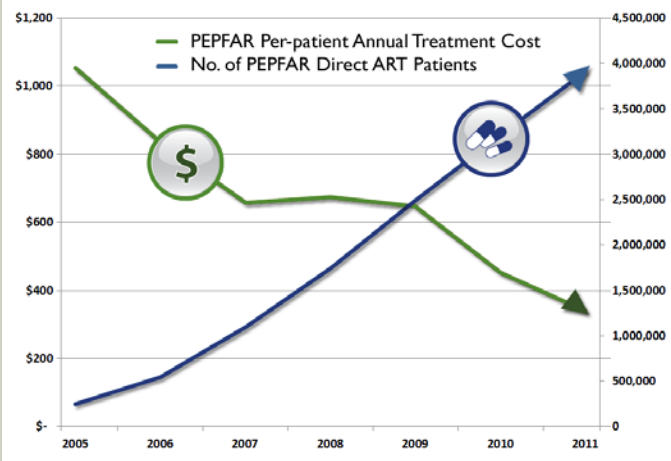
### STRETCHING EVERY DOLLAR INVESTED

CDC's groundbreaking work in cost-effective and efficient programming ensures the greatest impact for every dollar invested. This work included PEPFAR's first multi-country expenditure analysis project to identify key cost drivers and estimate the annual per-patient costs of HIV services. Results of this are illustrated in figure 5.

**Figure 5**

PEPFAR's annual cost of supporting a patient on treatment has declined from approximately \$1050 in 2004 (when PEPFAR began) to under \$335 in 2011.

**Treatment Scale-Up and Per-Patient Cost Decline**



Source: PEPFAR Blueprint (2012)

### Expenditure Analysis Boosts Program Efficiencies and Impact

CDC has led the way in developing tools for routine expenditure analysis that links costs to program outputs. These tools have become a cornerstone of PEPFAR's plan to accelerate program efficiency and impact and are being implemented broadly across PEPFAR-supported countries.





## Advancing Strategic Collaboration

Through strategic partnerships, CDC is able to extend its reach and impact. A wide range of collaboration constructs are used including embedding CDC staff within partner-organizations such as Ministries of Health, WHO, World Bank, Department of State, OGAC, USAID, and DoD. Public-private partnerships have also played an important role in increasing PEPFAR impact. An example of this is a successful collaboration with Becton, Dickinson and Company to improve laboratory capacity in sub-Saharan Africa.

### WHO HIV/AIDS GUIDELINES

CDC contributed to more than 95 WHO HIV/AIDS guidelines since 2003. See examples at right.



Source: [who.int/hiv/pub/guidelines/](http://who.int/hiv/pub/guidelines/)

## INNOVATIVE PARTNERSHIPS

CDC has worked to establish a number of innovative partnerships, all of which were designed to have a lasting and multi-sector impact such as the establishment of ARC, see below. CDC is also working to put in place self-sustaining collaborations such as the African Society for Laboratory Medicine (see p. 19).

### The African Health Profession Regional Collaborative (ARC)



ARC is implemented in partnership with the Commonwealth Secretariat (based in the UK); the Commonwealth Nurse Federation; the Emory University School of Nursing; and the East, Central, and Southern Africa Health Community, which serves as an intergovernmental regional coordinating body.

Through ARC, national nursing and midwifery leadership works together to improve professional regulation in the region. Through peer-to-peer collaboration and sharing of resources, ARC not only advances rapid scale-up of regulatory reform in the region, but also builds long-term capacity across African professional institutions.



## Strengthening Program Integration

### STRATEGIC PROGRAM INTEGRATION AND LINKAGES

Strong program integration at both the program and service delivery levels will result in increased efficiency and improved health outcomes. CDC accomplishes this integration by tapping into existing health platforms that are complementary to each other. CDC further increases host country capacity by ensuring health infrastructure and systems are well integrated including disease surveillance, health information systems, and quality laboratory networks.



#### Integrating HIV and Tuberculosis (TB) Service Delivery

TB is the most common co-infection among people with HIV and the most common cause of death for people living with HIV in sub-Saharan Africa. CDC supports research and other efforts designed to improve health impact through the integration of TB and HIV programs and service delivery.

#### Integrating Services to Prevent Mother-to-Child Transmission (PMTCT) with Maternal and Child Health Care (MCH)

CDC works to leverage limited resources by integrating service delivery into established in-country health care platforms. Integration of PMTCT into mainstream MCH care is particularly beneficial as it removes access impediments, which helps accelerate scale-up of PMTCT services and improves retention of patients.





*Photo: African Society for Laboratory Medicine Conference 2012*

## Section 4: TRANSITIONING TO COUNTRY LEADERSHIP

---





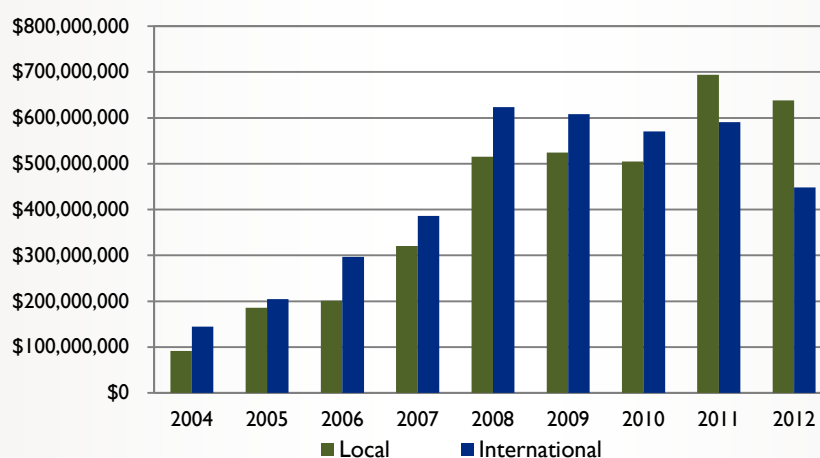
## Successes in Transitioning to Country Leadership

### MAKING STRATEGIC INVESTMENTS

CDC uses cooperative agreements to boost country capacity by pairing PEPFAR funding with CDC technical support that is tailored to fit the specific needs of the host country and unique characteristics of the local epidemic.

Over time, as local capacity grows, funding is gradually transitioned away from U.S. domestic and international partners to host country partners. This trend is now accelerating as investments in workforce development, infrastructure, and systems take hold, increasing the momentum toward local implementation. CDC now invests more resources in Ministries of Health and other local partners than in U.S. or international partners (see figure 6 below).

**Figure 6.** CDC Investments Build Country Capacity (FY 2004 – FY 2012)



#### Local Partners include:

- Faith-Based Organizations
- Foreign Governmental Entities (Not MoH)
- Hospitals
- Ministries of Health (MoH)
- Non-Governmental Organizations
- Private Entities
- Universities

#### International Partners Include:

- Faith-Based Organizations (International/U.S.-based)
- Multilaterals (such as WHO)
- Non-Governmental Organizations (International/U.S.-based)
- Universities (International/U.S.-based)

Source: CDC, 2012

## CDC'S PROVEN TRACK RECORD

CDC has successfully transitioned key components of the HIV response to country leadership using a stepwise approach that builds host country capacity and independence over time to lead, manage, and implement their national HIV response.

100%

### All National Blood Safety Programs Transitioned



If a person receives a blood transfusion with HIV-infected blood, there is a 95% risk they will become infected with HIV. In 2004, CDC began working with PEPFAR-supported countries to establish and strengthen national blood transfusion services. Since that time, all of these programs have been transitioned to Ministries of Health management. (Photo: CDC-Zambia)

50%

### HIV Care and Treatment Services Transitioned

CDC has been working with Ministries of Health and other country partners to transition care and treatment services to host country leadership and management. As of December 2012, approximately half of the 1,300 health facilities supported by CDC in sub-Saharan Africa have been successfully transitioned.

(Photo: CDC-South Africa)





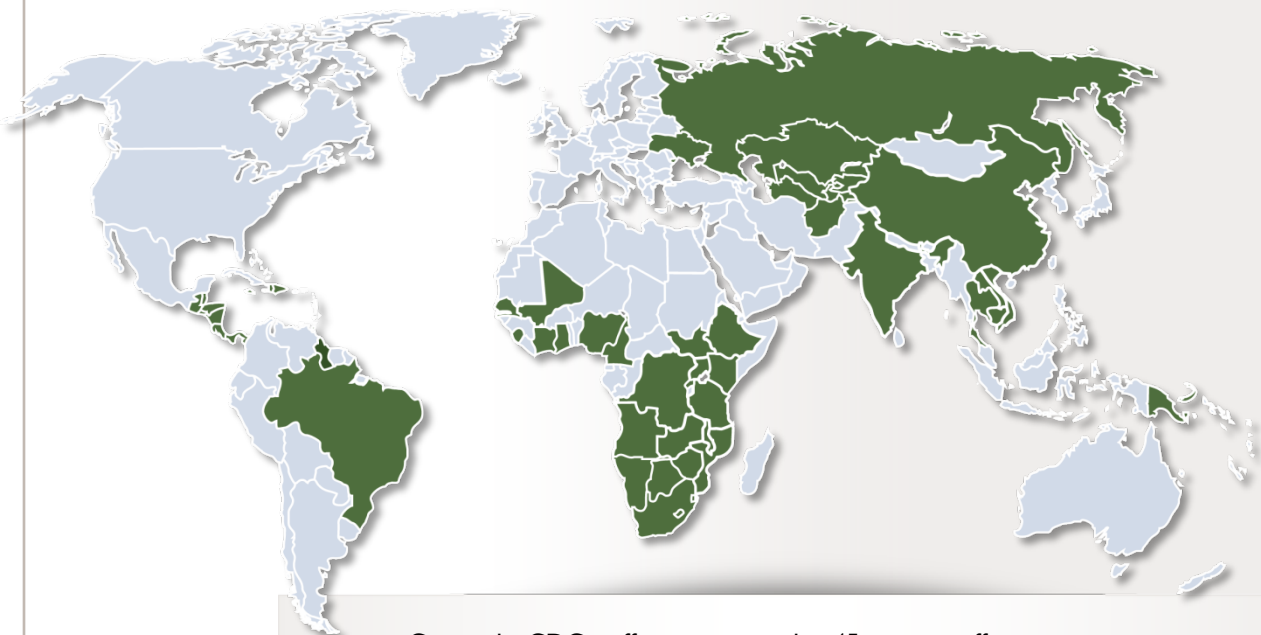
## Building Host Country Capacity

### LEVERAGING CDC's UNIQUE WORKFORCE

CDC's workforce of clinicians, health scientists, prevention specialists, epidemiologists, laboratorians, and public health advisors are strategically located in PEPFAR-supported countries to work directly with Ministries of Health and other local partners to build institutional capacity.

CDC's decades-long relationships with Ministries of Health have inspired the trust and on-the-ground collaboration that supports the transfer of knowledge and skills that are essential to implement and sustain an effective HIV response.

### Where CDC Fights Global HIV/AIDS



- Currently, CDC staff are positioned in 45 country offices, with many embedded or co-located in Ministry of Health facilities.
- Most of these staff are host country nationals who receive daily mentoring and on-the-job training.
- Additionally, headquarters staff in Atlanta provide support to the 45 country offices and over 30 additional countries.





## STRENGTHENING LABORATORY CAPACITY

A strong national laboratory system is essential for responding effectively to HIV and other diseases. Tremendous strides have been made in the establishment of high quality laboratory networks in partner countries. CDC's approach to building laboratory capacity is to ensure continuous quality improvement and the establishment of rigorous quality assurance systems.

### National Laboratory Plans

To promote country leadership, CDC works with Ministries of Health to support the development of national strategic plans for laboratories. These plans support all health sectors, build efficiencies, and enable countries to respond effectively to HIV and other emerging health threats.



## Strategic Partnerships

### Self-Sustaining Laboratory Accreditation Program

In 2008, CDC, in collaboration with WHO and 12 African governments, launched a laboratory accreditation program for sub-Saharan Africa that supports stepwise improvement toward accreditation. This program promotes measurable improvement in establishing high quality laboratories in resource-limited settings. As of June 2012, 26 countries were implementing this program.



### African Society for Laboratory Medicine

CDC was instrumental in establishing ASLM to strengthen laboratory networks across the African continent. ASLM is composed of and led by African Ministries of Health and laboratory leadership as well as other local, regional, and international leaders and partners. ASLM convened its first international conference in December 2012 with 1,000 participants from 64 countries, and has launched the *African Journal of Laboratory Medicine* ([AJLOnline.org](http://AJLOnline.org)) to disseminate progress and lessons learned.

## High Impact Laboratory Training

### Regional Center of Excellence for Laboratory Training

CDC led the establishment of the African Centre for Integrated Laboratory Training in Johannesburg, South Africa. This facility is the first of its kind and has trained hundreds of individuals from sub-Saharan Africa, Asia, and the Caribbean using a unique and intensive hands-on approach.



### Innovative Training for HIV Rapid Testing

CDC and WHO have jointly developed a comprehensive tool kit to quickly scale-up the ability of PEPFAR-supported countries to perform accurate, reliable HIV rapid testing. The tool kit includes 16 modules packaged with a training video/DVD, presentation slides, a trainer's guide, participant manual, and laminated job aides. (Photo: CDC)

### Strengthening Laboratory Management toward Accreditation (SLMTA)

Since its launch in 2009, SLMTA has been embraced as a grassroots movement to improve laboratory capacity in resource-limited settings. This innovative, task-based training and mentoring program enables immediate, measurable improvement using existing laboratory resources. The effectiveness and popularity of this approach has taken root in many countries, stimulating improvement across the entire health system. As of June 2012, a total of 865 health workers have received SLMTA training.





## Section 5: CDC's PRIORITIES MOVING FORWARD

---





## Accountability and Impact

### A FRAMEWORK FOR ACCOUNTABILITY

CDC has implemented a series of robust accountability, oversight, and quality management mechanisms to ensure optimal public health impact and stewardship of U.S. government funds. The framework is built upon fiscal oversight and program strategy, monitoring, and evaluation. Core components are described below.

#### Assessments of Data and Service Quality

Ensuring the quality of data and services is vital to PEPFAR's continued success. These assessments include in-depth reviews of select sites to ensure quality service delivery and robust data quality for program reporting and expenditure analysis. They also serve as a capacity-building initiative to improve quality assurance activities led by national governments and implementing partners.

#### Site Monitoring System

CDC is systematizing its approach to site monitoring to ensure service delivery quality and demonstrate good stewardship using standardized site-monitoring criteria and data systems to streamline site-visit assessment, documentation, and reporting. This system allows analysis of service-delivery quality at the site level as well as within and across PEPFAR-supported countries.

#### Country Monitoring and Accountability System

CDC proactively launched the Country Monitoring and Accountability System (CMAS) in 2011 to identify any challenges resulting from the rapid scale-up of complex CDC programs funded by PEPFAR. CMAS is designed to assess CDC's fiscal and programmatic accountability in the following key areas:

- **Intramural Resources:** Ensuring proper management and stewardship of financial resources, property, and human resources in CDC's overseas offices
- **Extramural Funding:** Ensuring responsible and accurate management of financial and other resources external to CDC's overseas offices
- **Public Health Impact:** Ensuring the delivery of consistently high quality interventions and technical assistance that positively impacts the health of populations served by the program





**All CDC country offices were visited and assessed between February 2011 and March 2012.** Country offices now receive visits every two years. These visits will provide the same internal programmatic and financial oversight and will have an increased emphasis on the provision of supportive technical assistance to ensure continual improvement in HIV/AIDS program management and implementation.

For summaries of CMAS visits, go to [www.cdc.gov/globalaids/What-CDC-is-Doing/impact.html](http://www.cdc.gov/globalaids/What-CDC-is-Doing/impact.html)

## ENSURING IMPACT

CDC carefully tracks program progress and impact using quantitative performance measures to ensure achievement of PEPFAR goals. These measures also help CDC gauge program maturity and effectiveness in key programmatic areas essential to mounting an effective HIV response. Each technical area and performance category tracked is provided below.

### HIV Prevention, Care, and Treatment

- Antiretroviral treatment
- Prevention of mother-to-child transmission
- Voluntary medical male circumcision
- TB screening and treatment
- HIV testing and counseling
- Reaching key populations
- Early infant HIV testing
- Provision of care

### Health Systems Strengthening

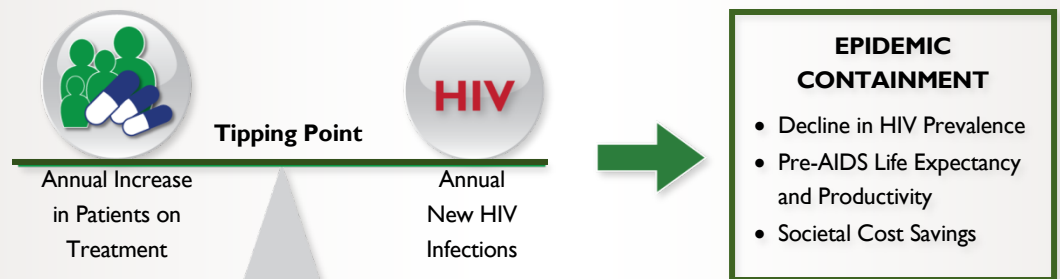
- Workforce capacity
- Laboratory capacity



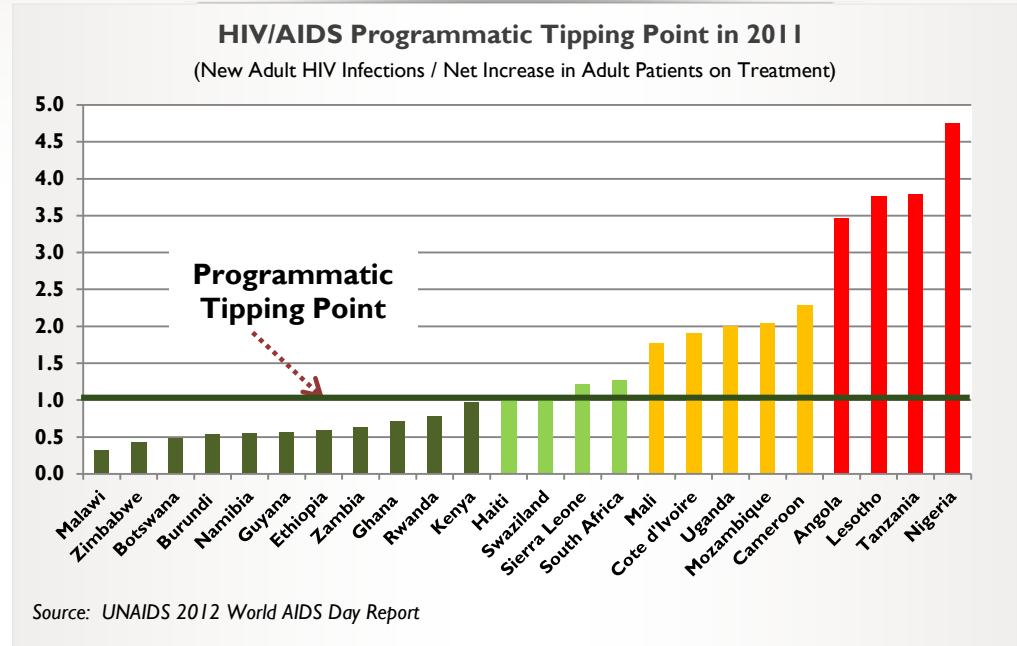


## REACHING THE TIPPING POINT IN THE EPIDEMIC

The 2012 PEPFAR Blueprint introduced a “tipping point” metric to determine if countries are on a sustainable scale-up path for containing the spread of HIV. This tipping point occurs when the annual increase in patients on treatment exceeds annual new HIV infections. Achieving this point is a key step toward program sustainability, declining HIV prevalence, and eventual epidemic containment.



PEPFAR-supported countries are progressing at different rates toward their epidemic tipping points. Eleven countries have reached the tipping point (represented by the dark green bars in the figure below) and four more are close to achieving it (light green bars).



*The battle against HIV/AIDS is yielding to science and worldwide commitment.*





## HISTORY IN THE MAKING

The United States is leading the way toward ending the HIV/AIDS epidemic. What was thought to be impossible is being achieved. Millions of lives are being saved every day and the capacity for PEPFAR-supported countries to lead, implement, and finance their HIV response is growing.



### PEPFAR IMPACT (FY 2012 unless otherwise noted)

- Life-saving antiretroviral drug treatment for nearly **5.1 million** people, up from 1.7 million in 2008 (as of September 2012)
- HIV testing and counseling for more than **11 million** pregnant women
- Antiretroviral drug prophylaxis to prevent mother-to-child HIV transmission for nearly **750,000** HIV-positive pregnant women, allowing approximately **230,000** infants to be born HIV-free
- Care and support for nearly **15 million** people, including more than **4.5 million** orphans and vulnerable children
- HIV counseling and testing for more than **46.5 million** people, providing a critical entry point to prevention, treatment, and care
- Medical circumcision procedures for approximately **2 million** men (cumulative through September 2012)

Source: PEPFAR, 2012

***“There is great reason for hope, but the job is far from finished ... the opportunity before us is extraordinary.”*** – Ambassador Eric Goosby, on the 10<sup>th</sup> anniversary of PEPFAR (January 2013)



Division of Global HIV/AIDS  
Center for Global Health  
Centers for Disease Control and Prevention  
U.S. Department of Health and Human Services

1600 Clifton Road, NE  
Atlanta, GA 30333  
U.S.A.

Download this Program Update at

[www.CDC.gov/globalaids/publications/CDC-Global-HIV-Update-2013.pdf](http://www.CDC.gov/globalaids/publications/CDC-Global-HIV-Update-2013.pdf)

For more information on the Division of Global HIV/AIDS, visit [www.CDC.gov/globalaids](http://www.CDC.gov/globalaids)

For more information on PEPFAR, visit [www.PEPFAR.gov](http://www.PEPFAR.gov)

*Photos: copyright David Snyder/CDC Foundation (unless otherwise indicated)*

